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KARYOLOGICAL RECORDS

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Chromosome numbers for the Italian flora: 17

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Abstract

This study presents the first chromosome counts for Italy for *Cephalaria joppensis* (Rchb.) Coult. (Caprifoliaceae), a cryptogenic species occurring in southern Italy. The first chromosome counts for *Hieracium acanthodontoides* Arv.-Touv. & Belli (Asteraceae), endemic to central and southern Italy, and *H. pulchellum* Gren. ex Griseb. (Asteraceae), showing a disjunct distribution between western Alps and Abruzzo (central Italy), are also presented.

Keywords

Asteraceae, Caprifoliaceae, *Cephalaria*, cytotaxonomy, *Hieracium*

How to contribute

Texts concerning new chromosome data should be submitted electronically to Antonio Giacò (antonio.giaco@biologia.unipi.it), including indications on voucher specimens and methods used.

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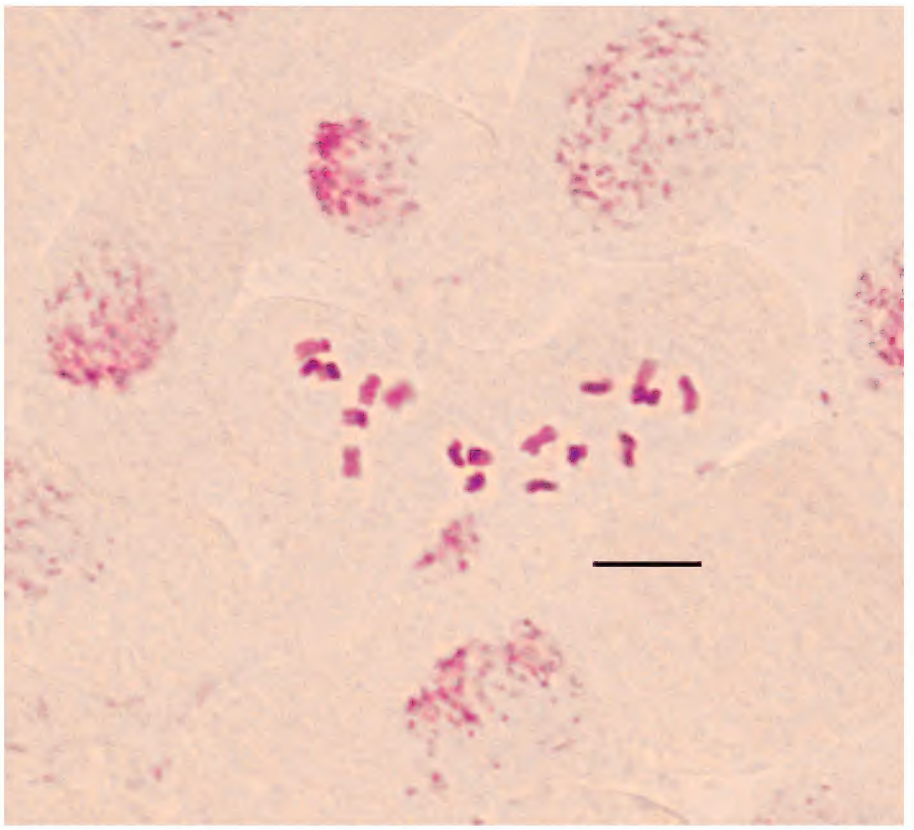

Figure 1. *Cephalaria joppensis* (Rchb.) Coult. from Felitto (Salerno), $2n = 18$. Scale bar: 10 μm.

Chromosome counts

Cephalaria joppensis (Rchb.) Coult. (Caprifoliaceae)

Chromosome number. $2n = 18$ (Fig. 1).

Voucher specimen. ITALY. Campania. Felitto (Salerno), Al ponte nuovo, sulla SR 488 (WGS84: 40.377875°N, 15.238914°E), scarpate e margini stradali, 168 m, 27 June 2024, *E. Del Guacchio & L. Paino* (NAP0007578). **Calabria**. Rende (Cosenza), loc. Arcavacata (WGS84: 39.365616 N, 16.228283 E), incolto a margine strada, 202 m, 19 July 2024, *L. Bernardo* (NAP0007057; CLU).

Method. Squash preparations were made on root tips obtained from germinating seeds. Root tips were pre-treated with 0.3% colchicine for 3 h and then fixed in a Carnoy solution (3:1 absolute ethanol-glacial acetic acid) for 30 minutes. After hydrolysis in 1N HCl at 60 °C for 7 minutes, the tips were stained with leuco-basic fuchsine for 3 h.

Observations. This species shows a scattered distribution in southern Italy and Sicily and is cryptogenic (Del Guacchio 2010; Del Guacchio and La Valva 2018). Our counts are the first for Italian populations and agree with those already known for Turkey (Verlaque 1977, under the name *C. joppica* (Spreng.) Matthews).

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Hieracium acanthodontoides Arv.-Touv. & Belli (Asteraceae)

Chromosome number. $2n = 36$ (Fig. 2).

Voucher specimen. **ITALY. Abruzzo**. L'Aquila, lungo SS80 del Gran Sasso poco dopo la casa cantoniera, scarpate a *Pinus nigra* su sfatticcio calcareo (milonite),

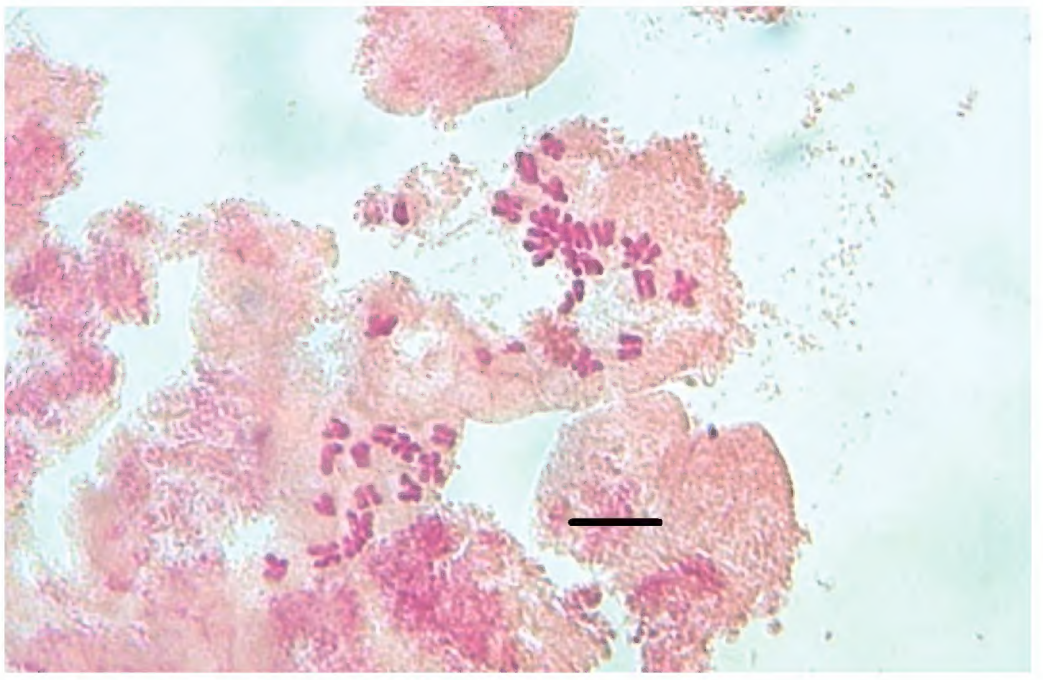

Figure 2. *Hieracium acanthodontoides* Arv.-Touv. & Belli from L'Aquila, $2n = 36$. Scale bar: 10 µm.

1050 m a.s.l., exposure NW (WSG84: 42.426034°N, 13.345462°E), 13 Jun 2024, *S. Orsenigo, G. Baldesi* (PAV-H201050).

Method. Squash preparations were made on root tips obtained from germinating seeds. Root tips were pretreated with 0.4% colchicine for 3 hours, washed three times in distilled water and then fixed in Carnoy solution (3:1 absolute ethanol-glacial acetic acid) for 50 minutes. After hydrolysis in 1 N HCl at 60 °C for 5 minutes, tips were stained with leuco-basic fuchsine for 3 hours.

Observations. This perennial species is endemic to Abruzzo, Lazio, and Puglia (Bartolucci et al. 2024). It is characterized by a unique combination of character-states, notably its serrate-dentate leaves with teeth ending in an acute, nearly aristate apex (Gottschlich 2018), which support its inclusion within *H.* sect. *Acanthodontoidea* Gottschl. (Gottschlich 2009). This species grows on limestone rocks in shaded locations, on rocky slopes and more rarely on limestone debris or in pine forests (Gottschlich 2009). The chromosome number of this species is reported here for the first time.

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***Hieracium pulchellum* Gren. ex Griseb. (Asteraceae)**

Chromosome number. $2n = 27$ (Fig. 3).

Voucher specimen. **ITALY. Liguria**. Triora (Imperia), alla Gola o Falesia di Loreto, su SP81, pareti rocciose calcaree, 700 m a.s.l., exposure W (WSG84: 43.997495°N, 7.734044°E), 3 May 2024, *S. Orsenigo, G. Baldesi, M. Ottonello* (PAV-H200082).

Method. Squash preparations were made on root tips obtained from germinating seeds. Root tips were pretreated with 0.4% colchicine for 3 hours, washed three times in distilled water and then fixed in Carnoy solution (3:1 absolute ethanol-glacial acetic acid) for 50 minutes. After hydrolysis in 1 N HCl at 60 °C for 5 minutes, tips were stained with leuco-basic fuchsine for 3 hours.

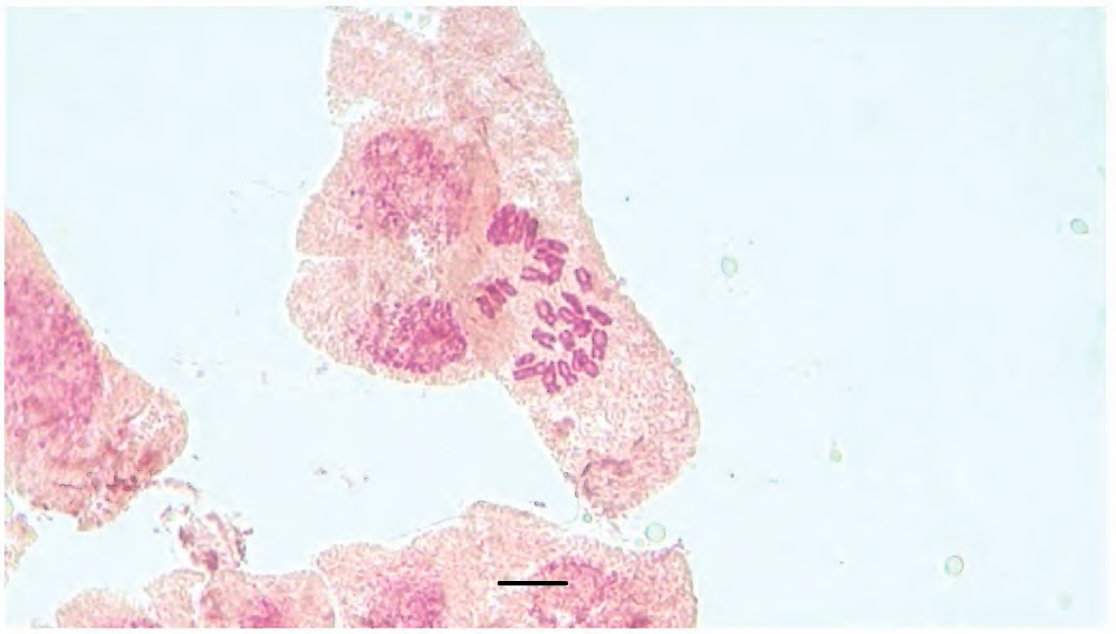

Figure 3. *Hieracium pulchellum* Gren. ex Griseb. from Triora (Imperia), $2n = 27$. Scale bar: 10 µm.

Observations. *Hieracium pulchellum* is mainly distributed in northern Italy, in the Maritime and Cottian Alps (Valle d'Aosta, Piemonte, Liguria), but disjunct populations occur in Abruzzo, central Italy (Bartolucci et al. 2024). This species includes perennial plants that predominantly grow on calcareous cliffs but can be found also on debris or rocky limestone soil in sparse beech woods and pine forests (Gottschlich 2009). The chromosome number of this species is reported here for the first time.

G. Baldesi, G. Ginelli, D. Calzoni, S. Orsenigo

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